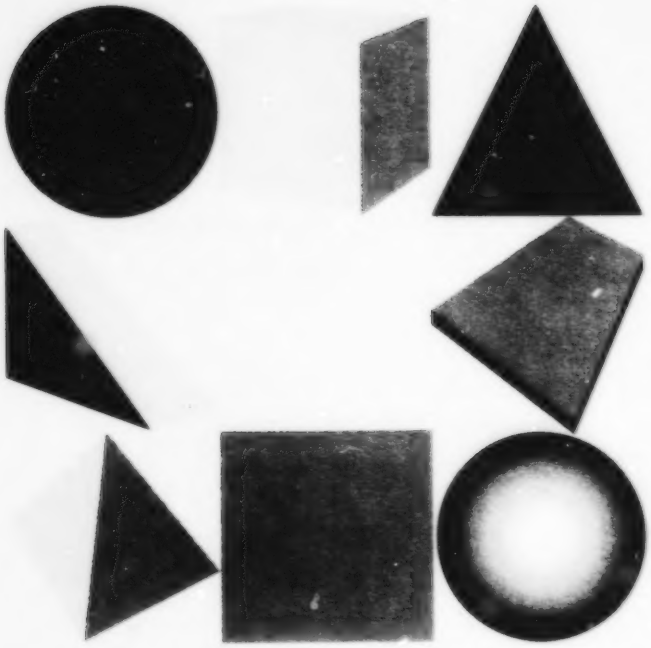

THE UNIVERSAL PLAYGROUND: A PLANNING GUIDE

MINISTRY OF EDUCATION

Province of British Columbia

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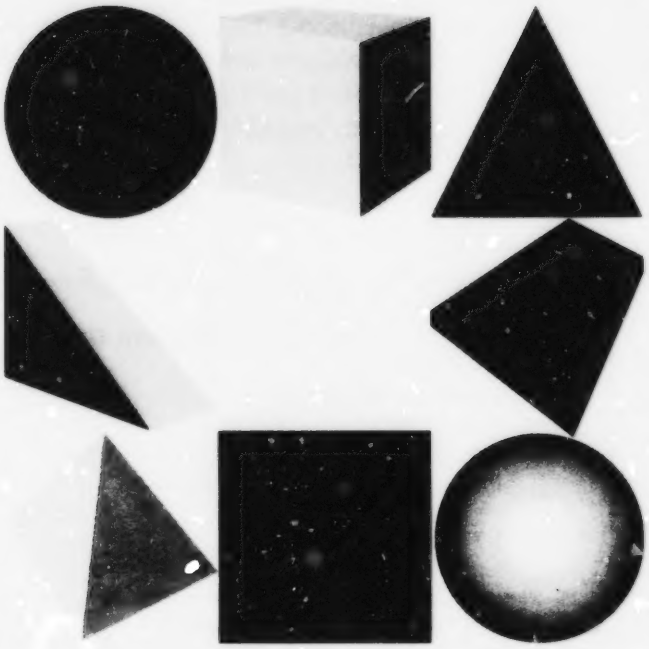

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Introduction

Use of this Document

The purposes of this document are to:

- assist schools in planning playgrounds for children of all abilities;
- show ways that this can be done using limited resources; and
- suggest ways that such universal playgrounds can contribute to the overall educational objectives being developed in British Columbia.

This document should help leadership personnel and parents interested in upgrading and retrofitting playground facilities at the local school or district levels. In developing a plan for redesigning playgrounds, planners must weigh benefits against costs. Since financial resources are always at a premium, information about the possible adaptations should help in the decision making process. Establishing a "wish list" of desired modifications or pieces of equipment can be a valuable planning tool. Although the immediate needs of all schools will vary, depending upon the student population, this document will help:

- organize the planning
- identify the most useful adaptations
- determine the resources required.

By stimulating discussion within the planning group, suggesting methods of determining local needs and reducing time spent acquiring information, this document may encourage schools to improve their playground facilities for all children.

This document may also help teachers, occupational therapists, physical therapists, community recreation personnel and adaptive physical educators determine how the playground environment can be utilized to augment individualized programs developed for students with special needs.

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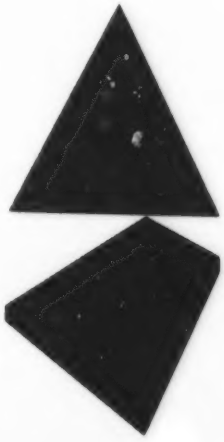
Significance for Playground Design

The activities which occur during free play on the playground form a valuable part of any child's developmental program. Children with special needs may benefit to a greater degree from such activities, since their disabilities may have kept them from developing the social and physical skills often learned in informal play environments. These skills are important because they influence the extent to which children will be integrated socially and vocationally.

The need to develop the social skills required to live co-operatively with one's peers is a two way street. It is important for all students to develop a positive awareness of the differences within the school population and the ability to accept these differences with respect and understanding. In free play, children are exposed to an element of give and take which helps define acceptable social behaviour. Physical activities stimulated by playground equipment improve balance, eye-hand co-ordination and gross motor skills, all of which need to be encouraged in all children.

A playground must be accessible to all children in order to facilitate these needs.



Rationale

Philosophical Considerations

• Importance of Play

Play is an essential activity for all children. It is one way children explore their world. It provides an avenue for children to exercise imaginative and creative thinking in a safe, secure setting. When play takes place in a group situation it helps children validate their thinking with that of other children. Through such play activities children develop social maturity. They learn how to co-operate with others, what makes others happy or unhappy and what they must do to obtain the co-operation of others. In play activities, children can learn from their discoveries with minimum risk.

By watching other children, children with special needs determine what activities are possible and might lead to greater enjoyment of the play experience. Children are encouraged to try new activities, and to gain favourable attention by duplicating the activities of others, or exceeding them if possible. By engaging in such interaction, children gain strength, enhance fine and gross motor development, develop co-ordination and balance, build social relationships, and lay the foundation for a positive self image.

Even solitary play provides an opportunity for children to practise newly learned skills in non-threatening situations. Many authorities feel that good motor, perceptual and social development are critical for learning basic academic skills. The activities which take place on the playground are therefore very important. It is necessary then, that the playground environment should be designed to maximize its potential as a learning aid.

The requirements of children with special needs are as great as those of other children in this respect. Children who are born with, or acquire, disabilities face challenges beyond those of most children. If the playground experience is beneficial for most children, it may also be assumed that it is of equal value to children with special needs. For this to be realized, children with special needs must have equal access to those facilities which promote developmental growth.

• Value of Integration

The universal playground, designed for the full spectrum of developmental abilities, benefits all children and works to the advantage of children with special needs. By most incidence studies, children with special needs represent approximately 10 per cent of the total school-aged population, and this percentage carries into the total community. This means that individuals with disabilities will always be a significant minority in society. Therefore, society needs to develop the skills and attitudes which enable the minority to make their maximum contribution. The informal environment of the school playground is an excellent place to begin. In a democratic society the provision of equal opportunity for all is a tenet which should not be denied at the very point where democratic principles are first introduced.

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Once the playground has been designed to include the entire school population, a number of secondary benefits emerge. In many locations, the school playground is viewed as a community resource. After school, and on weekends it is utilized by a variety of individuals who might not have been anticipated during the initial planning. Parents and grandparents may bring pre-school children to the playground for enjoyment and exercise. Day-school supervisors may bring after-school groups to channel their energy before their parents collect them. Even during school hours, teachers who are older or have disabilities find the universal playgrounds designed for all children more accessible and easier to supervise, especially if they want to assist children with special needs.

Current Guidelines

•Safety

Existing guidelines focus primarily on the layout and engineering of playground equipment to maximize the safety of all children involved in play activities. Generally, no unique safety considerations are needed in the playground design for children with special needs that are not also desirable for able bodied children. Safety features for children with special needs take other forms. Teachers or therapists may equip certain children with safety helmets, or put seat belts on children who use wheelchairs. Textured walkways, sound generators on moving equipment, warning colours on railings and walls, and appropriate safety signs are particularly appropriate for students with special needs but also useful for able bodied children. Completely risk-free playgrounds do not exist, but careful planning and attention to details will avoid most predictable hazards.

Planners are advised to become thoroughly familiar with the guidelines (CAN/CSA-Z614) on *Children's Play Spaces and Equipment* established by the Canadian Standards Association. A publication available from The Playground Network, Vancouver, B.C., entitled *A Safe Place to Play: Guidelines for Safe Playgrounds* is an excellent source of information. Guidelines are important both in the initial design of the playground and the upgrading of an existing playground. Other publications dealing with playground safety are listed in the bibliography at the end of this document.

• Accessibility

Planners need to explore the cited publications that are specifically concerned with designing integrated or universal play facilities. Some excellent suggestions are made in the Access Series published by Environment Canada/Canadian Parks Service, *Design and Parks Programs*, 1989. Several other sources of information are listed in the bibliography at the end of this document.

Developmental Issues

Growth and development of all children are measured across several dimensions. Children may vary greatly along one or more of these dimensions. For example, children who fall at the low end of the scale for physical size may be at the top of the scale for intellectual development, or children with advanced motor skills may have poor social development. Children with special needs are perhaps the most obvious example of variation because they encounter unusual challenges along one or more dimensions. Ideally, the playground environment will enable all children to use their stronger areas to compensate for areas requiring further development. The well-designed universal playground provides experiences to challenge all skill areas, and to accommodate all developmental stages.

• Social/Emotional Development

Many children with special needs require more support in the areas of social/emotional development than do able bodied children. Children with a physical, or a sensory disability may have had limited opportunities to interact with other children, or may have been treated differently by the children they did encounter. Emotional immaturity is more commonly found in children with special needs particularly, until they acquire the experience required to develop acceptable social behaviour. Children with severe social or emotional problems may lack internal controls, or may be too internalized, to be readily accepted by other children. Children with limited intellectual development often respond socially and emotionally like younger children. The universal playground environment should have areas that encourage social interaction and be easily supervised.

• Intellectual Development

Most children with special needs have normal intellectual development, however, it may be more difficult for some with pronounced physical, sensory, motor or emotional challenges to demonstrate this. Play areas which encourage intellectual exchanges can help facilitate integration among all children. Children with delayed intellectual development require experiences to enhance social, emotional and motor development. The universal playground needs to have a broad range of equipment and activities which appeal to all children, regardless of intellectual development.

• Sensory Development

Although many children have visual irregularities, or transient hearing difficulties, the actual prevalence of severe vision or hearing disabilities is very low. Children with severe visual impairments become more dependent on other senses, especially hearing and touch. Playground design and equipment incorporating texture, manipulative devices, bright colours, and sound are particularly helpful for children with low vision. In recent years, an increasing percentage of children with severe visual impairments have multiple handicapping conditions. This may require greater creativity in terms of including them in group play activities.

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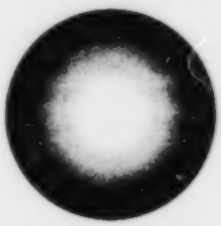
Children with hearing impairments also vary considerably in the degree of hearing loss represented. Most who are hard of hearing have usable residual hearing which may be enhanced by a hearing aid. Many children with hearing impairments have excellent motor skills and are capable of utilizing almost any piece of playground equipment. Children with profound hearing impairments encounter their greatest difficulties in the area of communication. The inability to understand the speech of other children and difficulty in making themselves understood, may create frustration, hamper social development and delay integration. For these children, informal activities on the playground can be very valuable.

• Perceptual-Motor Development

Some children with otherwise normal development in most other areas, encounter unusual difficulties with gross and fine motor co-ordination. Still others who appear to have normal hearing and vision, have trouble perceiving shapes, form, depth, movement or a variety of cognitive concepts. Frequently, this can result in learning disorders, although children may have average or above average intellectual ability. Many authorities attribute such difficulties to impaired or delayed neurological development. Whatever the cause, students with perceptual-motor delays may lack co-ordination, or have a tendency to be accident prone. Supervisory personnel may need to be more attentive to such children. In general, however, playground experiences are positive for these children and offer an opportunity to improve their co-ordination skills. Not all children identified as learning disabled exhibit poor co-ordination; some perform well in athletic activities and should certainly be encouraged.

• Physical Development

Children come in all shapes and sizes, and with varying degrees of strength. Children with special physical needs represent a small segment of the physical growth and development curve. Whether the physical impairment is the result of genetic defects, trauma, or disease, it presents an added challenge to children within the school setting. A major concern is with mobility for children who may require a wheelchair, braces, a prosthesis or some other adaptation to enable them to participate in all possible educational experiences. Because many children with physical disabilities move more slowly and require more space, there may be concern that they could interfere with the free passage of other children, create hazards, or monopolize the utilization of certain pieces of playground equipment. In designing the universal playground, multiple access and egress points, and additional space are needed to minimize potential problems.



• Age Factors

In recent years there has been a trend toward establishing separate playground facilities for pre-school and school-age children. This recommendation is contained in the CSA standards, with the explanation that *"increasing numbers of young children from day care centres...are using these facilities"*.

In situations where dual playground facilities exist, the more challenging playground should also be supplied with a wide variety of equipment that might appeal to all ages. The basis for this is contained in the variations noted in the developmental scales described previously. Since many children develop socially, emotionally, intellectually and motorically at varying rates, the universal playground needs to have a broader range of play experiences available to accommodate everyone.

Where a single playground is being developed, activity areas for younger and smaller children should be kept well away from the activity areas used by older, more active students. There should be at least one observation point on the universal playground that has a clear view of the entire playground to facilitate adult supervision. Placement of any new equipment or rearrangement of existing facilities should be done with this in mind.

Curriculum Issues

• Integration

In recent years there has been a growing awareness that children with special needs are entitled to learn in settings which enable them to acquire the skills needed to gain the greatest degree of acceptance, and make the maximum possible contribution to society. Most children with special needs are able to attend their local schools. The Ministry of Education for British Columbia has acknowledged this in documents prepared to restructure the provincial curriculum. In describing the principles operating in reformulation of the curriculum the following statements have been made:

"Curriculum that is learner-focused and which assumes continuous progress allows for individualization of programming. This approach should therefore make it possible to address a wide range of student needs by slowing or accelerating the pace of instruction or by using special materials or equipment, as the situation demands. Achievement by special needs students will be recognized, and all students will have the opportunity to experience success in their particular program.

The school is one of the agencies that society expects will serve the basic human needs of young people. Design and delivery of school programs must be based on a recognition that all human beings have a fundamental need to make sense of their surroundings and of the events that take place around them. They need to have opportunities to share their understandings and to express personal feelings.

They also need to be nurtured and supported so they can develop into confident, independent individuals, who can communicate effectively and live and work productively in co-operation with others".

• Individualization

The Ministry of Education is aware of the individual differences existing in the learning styles of all children. Children with special needs are pointedly included in the discussion of variance in learning rates:

"... individual differences in rate and styles of learning must not be ignored. How each individual learns about a particular concept or conceptual relationship is a function not only of chronological age, but also of personal interests, learning style preferences, abilities, the learning opportunities and experiences which that individual has had in the past, and characteristics of the current learning environment".

• Socialization

The value of developing social interaction as a component of the overall curriculum is clearly noted:

"... The social interaction component of learning also contributes to motivation to learn, and development of interpersonal skills is valuable in its own right... . The social interaction aspect of learning is recognized as being vital".

The playground environment is only one of the child's educational experiences which promotes social growth, but for many children this avenue is preferable since its informality facilitates a wider range of expression for children with special needs.

• Attitudes

The necessity of developing attitudes leading to positive self-concepts and respect for the rights and feelings of others, is clearly outlined in the newest curriculum materials as they relate to:

- valuing oneself as a person of dignity and ability (i.e. self-respect);
- confidence in one's ability to cope and succeed (i.e. self-confidence);
- desire to work toward personal and shared goals (i.e. self-motivation);
- valuing the individuality of others and respecting their rights (i.e. respect for others)
- desire to work co-operatively with others (i.e. co-operative attitude);
- desire to take responsibility for oneself and others (i.e. personal/social responsibility).

These attitudes are for all children to develop. For children with special needs these attitudes could be the most critical part of the curriculum. The universal playground is an excellent place to develop and practise these attitudes.

Planning

The Planning Process

Planning a universal playground should be a democratic process and input from a variety of concerned individuals is desirable. Once the decision has been made to develop a new facility, or upgrade an existing one, the next step is establishing a committee to guide the project to completion. Membership on the committee should be both school and community-based. Individuals who might be considered for inclusion are: regular and special education teachers, supervisors, regular and adaptive physical education teachers, physical property personnel, parents, students, Parks and Recreation personnel, occupational and physical therapists, architects, representatives of service organizations, public health personnel, daycare and pre-school representatives, and any other individuals who might represent stakeholder groups or have unique knowledge and/or skills helpful for planning.

An example of a checklist itemizing a series of steps in the planning process is presented in Appendix I. Many of the items included are steps which would be required in most projects, but the local planning committee should consider modifying this checklist to include its unique planning issues. Appendix II is an example of a survey form which could be used to obtain input from potential school and community users. It, too, should be modified and expanded to cover all local concerns. Appendix III is a checklist for accessibility, and it also may require modifications to be appropriate for a specific setting. Finally, Appendix IV is a design rating scale for specific pieces of equipment already existing on a playground or planned for a playground.

Cost Factors

Determining development costs for a universal playground is complex. There are several costs that should be considered during the planning process. It is relatively easy to determine the immediate cash outlay for project materials and labour, but these could be minor when viewed over an extended period of time. Some questions will need to be discussed:

- To what extent will user-hours of participation increase as a result of proposed changes?
- How will the proposed changes increase or decrease maintenance costs?
- What are the annual costs of given equipment when depreciated over the anticipated life of the item?
- Will it be less expensive to design a completely new facility, or to redesign an existing facility?

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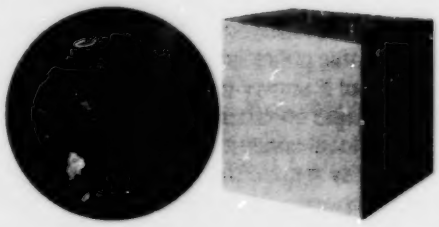
- What are the incidental economic gains to the school and community of providing the new or upgraded facility?
- What will the economic cost be to the school and community if the facility is not developed?
- What is the value of the positive public relations generated by the development of the facility?
- What are the human costs to children denied participation, if the facility is not developed?
- What is the cost to society if children are not permitted to develop to their potential?

Once these questions are addressed, and the decision is made to proceed, attention must be given to those costs incurred by the school district during the current fiscal year.



• Cost/Benefit Analysis

When faced with limited resources, priorities must be established to determine which areas should be developed first, and which items of equipment should be given greatest consideration. Usually, the decision will be made based on developing elements that will benefit the most children for the resources used. In the universal play environment, children with special needs must be considered. A standard single-width slide with a ladder access may be less expensive than a double-width slide with a ramp, slope or platform access. Far fewer children will be able to use the standard single-width slide. Another example is a relief map of the playground. It might benefit students with low vision and children with learning disorders who have orientation difficulties. It might also benefit primary students. It may, however, have limited value for other children. The cost of a tire swing may be similar to that of the relief map, but could be used by all students. If resources are limited and choices must be made, a higher priority should be placed on the tire swing.

• Local Modifications

Construction work undertaken by local physical property personnel and/or volunteers may not cost less than hiring contractors. After costs for material, labour for site preparation, construction and cleanup are analyzed, savings may disappear. In addition, structures built by local physical property personnel and/or volunteers may incorporate unforeseen costs. For example, volunteers may present liability problems that may eventually lead to additional costs.

Some aspects of site preparation and layout can be done as well by carefully supervised physical property personnel and volunteers as by outside contractors. If time and manpower are available, it may be possible to save money by using local personnel. During the planning period, the school or district physical property department should be involved. Once a blueprint of the proposed project is obtained, the determination can be made about the labour.

• Commercial Equipment

By consulting the telephone directory, and making inquiries to various other school and community sources, a list of playground equipment contractors can be compiled. Some companies have had experience designing playgrounds to accommodate children with special needs. The engineers and architects associated with these contractors may help suggest ways to increase the efficiency and utility of a playground. Any company providing these services will expect to sell its equipment for the facility and its design will be directed toward the inclusion of its products. This may, or may not, meet the goals and objectives established by the planning committee. A responsible contractor will modify the design to accommodate the desires of the planners. Even though a commercial developer is used, the planning committee should still ensure the play environment is responsive to local needs as determined by the survey of users.

A commercially designed and constructed playground is expensive. A significant portion of this cost is represented by the expertise utilized in designing equipment which incorporates the highest safety factors possible and the installation of the equipment on footings to ensure the maximum durability of each play activity. The combined use of contractor and physical property personnel expertise may result in the greatest value for the resources expended.

• Maintenance

Some authorities estimate that the maintenance costs of a recreational facility are between 15 and 20 per cent of the capital cost of construction. By keeping the problems of maintenance in mind during the planning process, certain long-term expenses can be minimized. Ease of access for maintenance equipment, as discussed earlier, is one consideration. Frequent inspection of all equipment, as outlined in the CSA standards, is essential. Moving equipment is more subject to wear, and may require lubrication, both of which add to the maintenance costs. Ice and snow removal in winter increases maintenance costs.

Certain items are more vulnerable to vandalism, especially if they are constructed of inferior materials or improperly installed. Other than by completely fencing and locking the playground area during unsupervised periods, there is no way to avoid some vandalism. By avoiding items that have parts which can be easily removed, bent, or broken, vandalism costs can be reduced.

• Obtaining Funding Resources

A few integrated facilities have been completed as joint projects between school districts, and municipal Parks and Recreation departments. Occasionally, parent or professional organizations providing services for the handicapped will initiate the request for adapting playgrounds, and are willing to offset some of the costs. Service, fraternal and other community groups are often interested in funding projects consistent with their service mandates. More than one source of funding may be required if a playground is to receive wide use. By drawing up a master plan, the playground may be systematically developed over time. Establishing priorities and completing the project section by section as resources become available, may eventually result in a play environment worthy of school and community pride.

Playground Etiquette

Even with careful planning and sophisticated equipment, a universal playground will never reach its maximum potential for all children until there is a climate of co-operation, and an acceptance of children with special needs. An awareness of how the disabilities can be minimized in the play environment should be fostered. A program of preparation for staff, classmates, key community personnel and children with special needs can decrease conflicts and increase safety and enjoyment for everyone.

• Staff

All staff members who will be supervising or assisting children who use wheelchairs should be briefed both in the mechanics of the wheelchairs, and in how to manage wheelchairs without either children or staff sustaining personal injuries. An understanding of the devices used to assist children with special needs is important. A knowledgeable individual may be asked to demonstrate such things as:

- checking the wheelchair to ensure it is in good operating condition, the brakes, handgrips, arm and footrests are secure and the seatbelts are fastened.
- avoiding sudden wheelchair movements, or travelling too fast;
- setting the brakes when parked or transferring to or from the chair;
- avoiding uneven or unsafe surfaces;
- avoiding fast turns, and maintaining a safe distance behind unaware pedestrians;
- tilting wheelchair back, using the tipping bar to lift the front wheels for curbs, uneven ground, and stairs;
- handling a wheelchair on slopes and ramps;
- transferring a child from wheelchair to another surface;
- lifting child and wheelchair up stairs;
- assisting a child from ground to wheelchair or to a standing position;
- maintaining and caring for hearing aids to avoid costly repairs;
- learning mobility techniques used by children with visual impairments;

Playground supervisors should be alerted to situations that could hinder positive interaction between children with special needs and their playmates. The supervisor should promote activities to improve social acceptance, cognitive skills, physical well-being, or just sheer enjoyment. The supervisor should also know who are the children with visual, hearing, mobility, intellectual, emotional, and other impairments.

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All children should be encouraged to interact co-operatively, function as independently as their abilities will allow, and develop skills enabling them to adapt to their environment. The prepared parent, teacher or staff person supervising the universal playground can contribute significantly to this part of the child's curriculum.

• Able Bodied Students

Most school districts, where a concerted effort has been made to integrate more children with special needs, have incorporated a teaching unit designed to increase awareness, acceptance, and knowledge of how to relate to children with special needs. Fear of the unknown can inhibit children or adults from interacting with children with special needs. By removing the mystery, most individuals are able to interact positively with children with special needs. Some of the things able bodied children might be taught arelisted below:

- Offer to help, but do not feel badly if the child with special needs does not want help.
- If he or she does want help, let him/her tell you the best way to give it.
- Treat them the way you would like to be treated.
- Do not show pity for children with special needs.
- Look for the things children with special needs do well, rather than weaknesses.
- You cannot "catch" another child's disability.
- Do not play with, or lean on, another child's wheelchair.
- Include children with special needs in group activities.
- Get the attention of the child with a hearing impairment before trying to communicate.
- Identify yourself when you meet a child with a visual impairment, and warn him/her of potential hazards.
- If the child with a visual impairment wants help walking around, let him/her hold your arm instead of holding his or hers.

A buddy system, pairing a child with special needs with an able bodied child, may be desirable when children with special needs first enter a universal playground environment. Once they are familiar with the layout and have developed their own circles of friends, it should not be necessary to have a formal buddy system.

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• Children with Special Needs

Children with special needs may need to be instructed in the proper etiquette to be followed in the play area. When children are considerate of others, they are more likely to gain acceptance and be included in co-operative activities. A few obvious areas should be discussed:

- ✓ Be careful not to bump into others unexpectedly with your wheelchair.
- ✓ Be sure to take turns, and do not monopolize equipment or activity areas.
- ✓ Do as much as you can for yourself, but ask for help before you need it.
- ✓ Remember to thank the people who help.

• Community Users

If the universal playground is to be used by the public when school is not in session, rules of conduct should be established and displayed prominently. Access to moving equipment and other potentially hazardous areas may need to be restricted.

If sufficient attention is paid to informing the public during the planning and development phase, a better understanding of the intent and potential of the universal playground can be communicated. Sometimes, Parks and Recreation personnel, parent group volunteers, or service club workers may offer to provide supervision. If so, training and orientation should be provided to help them feel more comfortable in dealing with all the children who might utilize the playground.

Playground Adaptations

Site Development

The first major problem for children with significant mobility limitations may be gaining access to the playground site. When a playground is originally being designed, it should be placed in the most accessible location. Ideally, the universal playground should be located close to an accessible school entrance. It should also be near a parking area available to the general public, if the playground is to be used as a community facility.

• Parking and Curbs

In many instances, there is an existing playground environment which is being redesigned to include all children. In these circumstances it is important to ensure that access and egress to the facility are adapted for children with mobility impairments. Parking areas should have spaces designated for the handicapped which are at least 3.7 metres (12 feet) wide and marked with the Accessibility Symbol. Curb ramps, if necessary, should be placed where a wheelchair can reach the walkways without having to pass behind parked cars. Ramped curbs at street corners should have a 2 centimetre (.75 inch) drop or a change in surface texture as a warning to children with visual impairments.

• Walkways

Walkways should be at least 1.5 metres (5 feet) wide to enable two people in wheelchairs to pass in opposite directions. The gradient should not be greater than 5 per cent [18 centimeters (7 inches) rise in 3.7 metres (12 feet)]; and the slope perpendicular to the axis of travel should be no more than 1.2 centimeters (.5 inch) in 1.2 metres (4 feet). The surfaces should be smooth, without humps, wide seams, or grates with wide slots that might catch chair wheels or crutch tips. Surface treatments should be firm and provide good traction. Appropriate materials include timber, rubber, concrete, or asphalt which will not soften in hot weather. Loose gravel, bark, or cobblestones should be avoided. Where slopes or raised surfaces are unavoidable, handrails should be provided on at least one side. A variety of different surface textures, and a 2 metre (6 feet) border of crushed rock, will assist children with visual impairments maintain their orientation. Vegetation which extends into pathways should be removed and plants which drop seeds, or are toxic or thorny, should be eliminated.

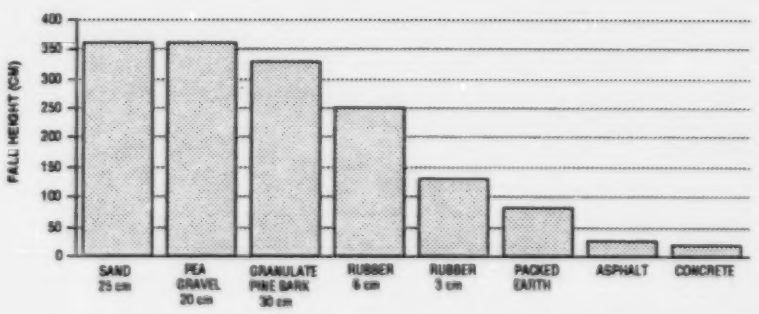
• Surface Treatments

Over the years, playground designers have relied on three recommended protective surface materials; sand, pea gravel and wood/bark chips. All of these have advantages. The sand used is coarse, washed and does not pack. It absorbs impacts, drains well, is durable and responds well to sun and rain. Sand is also an attractive ground cover and its initial cost is low. Pea gravel is composed of small, round, smooth stones and has most of the same advantages as sand. It does not cling to clothing, get in children's eyes, or blow in a wind. However, it can be thrown much greater distances. Both materials can conceal sharp or dangerous items. Sand is more likely to be used as a cat litter box, and its effectiveness is reduced if wet, frozen, or mixed with dirt.

Wood or bark chips make an attractive cover, are resilient, drain fairly well and are relatively inexpensive. Children are less apt to play with this material, and because of its acidic content, it is less likely to harbour insects or promote fungus growth. Wood and bark chips compact when wet, frozen, or pulverized. Through repeated play action, and their natural biodegradable nature, chips tend to decompose and become powdered and an irritant to some children. Wood chips, like the other two materials, can conceal sharp or dangerous items.

Unfortunately the above materials are unsuitable for children with significant mobility problems. Because of the depth of the material needed to absorb impacts, and its soft consistency, children using wheelchairs, crutches or long-leg braces, cannot manoeuvre easily over it. Another option is manufactured surfaces. These are available from a number of vendors. These surfaces are usually made from rubber, PVC plastics, or a combination of the two, and can be obtained in a variety of colours and thicknesses. These surface materials are soft and elastic to absorb shock, but firm enough to support wheelchairs, crutches and other mobility devices. They are tough, durable, slip resistant and water permeable. In some instances, grass can be planted and will grow up through the surface. The major disadvantage of these surfaces is the cost of labour and materials. A considerable amount of labour for ground preparation is needed before laying the material, to assure smoothness and proper drainage, and the material itself is comparatively expensive. Some of this expense can be recovered over time through ease of maintenance.

The following table shows the height from which a child can fall head first onto different surfaces before the critical limit for causing concussion (50 G) is exceeded. (G = gravity.)



Playground Layout

• Clearance

The arrangement of playground equipment determines the efficiency and utility of the play environment. For safety reasons, active play areas should be separated from walkways. Fixed items should have 3 metres (10 feet) of clearance space around them, and any moving equipment should have 5 metres (17 feet) of clearance. The clearance allocations for one item should not overlap those of another. Swing areas should have a clearance of 3.8 metres (12.5 feet) beyond the swing extension, and in all directions of the swing arc. Hand railings are often advised for placement around the clearance areas of moving playground equipment, and these are particularly helpful for children with low vision.

Children who use wheelchairs have restricted mobility, and limited reach. The following demonstrates the difference in the range of motion between an average size child (child height 125 centimetres, 6-9 years old) standing as opposed to seated in a wheelchair.

Seated in a wheelchair		Standing	
Easy side reach	30 cm (12 in)	Side reach	52 cm (20 in)
Easy forward reach	39 cm (16 in)	Forward reach	46 cm (18 in)
Max. forward reach	67 cm (27 in)	High reach (forward)	137 cm (57 in)
High reach (forward)	97 cm (40 in)	High reach (side)	142 cm (57 in)
High reach (side)	124 cm (50 in)	Low reach (side)	50 cm (20 in)
Full reach (down)	51 cm (20 in)		

When installing items of equipment or activity areas, placement can be made within the range of motion for all children whether they are in a wheelchair or standing. Where this is not feasible, two similar items should be provided at differing heights or distances.

To accommodate wheelchairs, some additional clearances should be considered.

- A surface area of 1.5 metres x 1.5 metres is needed for a wheelchair to make a 90 degree turn.
- A surface area of 2 metres x 2 metres is needed for a wheelchair to make a 360 degree turn.
- Children using electric wheelchairs need 2.1 metres x 2.1 metres to make a 360 degree turn.

• Traffic Patterns

For the universal playground environment to accommodate the maximum number of children, equipment should be placed so that children do not become grid-locked in moving from one interest area to another. Where children with mobility challenges will be included, the time devoted to planning functional traffic patterns will be well spent.

Swings, merry-go-rounds, and other moving items of equipment should be located around the perimeter or at the corners of the play area. This helps prevent children from running into the path of these items, and separates the areas of greatest physical activity. By placing fixed pieces of equipment toward the centre, it is possible to connect some of them with either bridges or tunnels so that some children can go over or under others when moving from one place to another.

Wherever possible, there should be two or more methods of access or egress for each piece of fixed equipment. A ramp or a slope with a handrail should be available for children with mobility disabilities, while other children use ladders or stairs.

• Practical Esthetics

Ideally, the play environment should be pleasing to the eye as well as entertaining in function. The judicious use of trees and other plantings heightens the enjoyment of the play area for children and adults. By placing metal equipment in shaded areas, and orienting it to the north, heat build-up on items such as slides or teeter-totters can be reduced.

The use of different paint colours to delineate activity areas adds visual interest and assists children with visual impairments to maintain orientation in the play area. The use of coloured surface treatments, as described previously, also complements the decor. Some integrated play facilities have introduced sound elements, especially with moving equipment, to serve safety and orientation functions.

Attractive rest and observation points provide space where children can relax and watch activities in the play area. These points also help playground supervisors and parents to supervise children. Benches and space for a wheelchair to make a 360 degree turn, are required in these areas (see Appendix III).

Variations in the play area's topography reduce visual monotony. Care must be taken to assure low areas are well drained. Where water stands, and the ground becomes soft, potential hazards are created for children with mobility disabilities who might stray off the firmer walkways.

• Maintenance

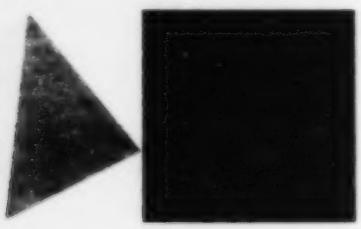
Another factor to be considered when planning the layout of the play area is the ease of maintenance. Ready access for mowing machines, and other maintenance vehicles, is essential. Adult maintenance personnel must be able to access all parts of the play area to keep it clean and to check all the equipment for potential safety hazards.

Possible Equipment

Despite efforts to make universal playgrounds accessible to children with special needs, not all children will be able to use all equipment. Attempting to make every part of the universal play environment accessible to all children may reduce the challenge for some others, particularly those with superior physical skills. With adaptations, however, more of the playground can be used by children with special needs without reducing its value for others.

Several pieces of equipment are beneficial to all children. Some can be constructed by school personnel or volunteers, while others are available from vendors. Which pieces of equipment to install first is a decision that usually becomes apparent after a survey is made of the potential users of the playground. By prejudging the equipment some children can utilize, there is a danger of denying them the opportunity to challenge their abilities.

The following are descriptions of equipment items which are particularly suitable for all students. For convenience, these items are grouped according to the developmental area most likely to be challenged by the equipment. Many of the equipment items, however, will enhance several developmental areas.



Developmental Goals and Equipment Modifications

A. Social and Emotional Development

EQUIPMENT	GOALS AND BENEFITS*	DESCRIPTION	MODIFICATIONS
Work and Play Tables	Promotes quiet, co-operative activities alone or in small groups.	Tables may be plain or have inlaid design. Tables should have sturdy benches, preferably with back-rests.	• Space for a wheelchair. • Textured surface design.
Sand Table	Promotes quiet, co-operative play alone or in small groups. Encourages imagination, creative activities.	A sandbox mounted on a table.	• Space for a wheelchair. • Indentations around table to enable students with poor balance to stand.
Sand Crane	Promotes co-operation and social interaction.	A pulley system with a rubber scoop attached to a chain or cable. Requires 2 children to operate, one to fill the scoop and one to operate the pulley.	• Appropriate surface for wheelchair. • Sound generated by pulley for student with visual impairment.
Play Counter	Encourages imaginative play with other children.	A counter top usually mounted under a platform which provides shelter.	• Appropriate surface and space for wheelchair.
Play Hut	Encourages imaginative play. May also be used as a non-punitive time-out area.	Sheltered area with some privacy but open enough to easily supervise.	• Large enough to accommodate wheelchair and 2 or 3 other children.
Steering Wheel	Encourages imaginative play either alone or with other children.	Steering wheel mounted on a post or beam.	• Mount at different heights so that one is accessible to students in wheelchairs. • Add a horn so that students with visual impairments can locate.
Sympathetic Swing	Promotes integration, co-operative interaction.	Geared to a neighboring swing, it is propelled when the child's able bodied companion swings.	• A sound producing device enabling (a) students with visual impairments to locate and determine if in use, and (b) students with developmental delays to learn cause and effect.
Wheelchair Ramps	Encourages socialization.	Should be long enough to provide 1:12 grade and be 1.5 meters (5 feet) wide with handrails at two heights. Should be built to enable access to playground equipment. May also provide a play area for all.	• As in description.
Tunnel	Encourages socialization.	Tunnel.	• Ramped access. • Textured areas to provide tactile orientation cues to students with visual impairments. • Large enough to enable either an adult or 2 children to go through together.
Wide Slide	Encourages socialization.	Double the usual width, enabling two children or one child with one adult to slide down side-by-side.	• Multiple access options including ramp for wheelchair.

* These 10 goals and benefits may also promote an awareness of social responsibility by encouraging co-operative play among all children.

B. Perceptual Motor Development

EQUIPMENT	GOALS AND BENEFITS	DESCRIPTION	MODIFICATIONS
Tire Swing	Improves balance and co-ordination.	Swing with a tire for a seat, suspended from a single point. Can seat one or more children.	• None required.
Spring Teeter-totter	Improves balance and co-ordination.	Comes in models for two, three, four, or even more children. Safer than the traditional fulcrum teeter-totter.	• Provide a non-slip surface at centre to enable child to lie there without slipping around.
Spring Rides	Improves balance and co-ordination.	Mounted on sturdy coil springs, topped by colorful stylized animal forms.	• Provide sound producing device to serve as auditory cue. • Back supports on animals' seats.
Standard Swing	Improves balance and co-ordination.	Two point suspended swing with soft seat or supportive harness seat.	• Provide sound producing device to serve as cue for locating and determining when in use.
Log/Tire Roll	Improves balance and gross motor skills.	Mounted on an axle. Child stands on device while it rolls beneath his feet. Handholds are provided.	• Provide sound producing device to ensure auditory cue for locating and knowing when in use.
Balance Beams	Improves balance and gross motor skills.	Installed a short distance above ground.	• Provide non-slip surface.
Gadget Panel	Improves fine motor skills.	A panel on which various devices such as faucets, knobs, latches, dials and switches have been mounted.	• Provide gadgets at different levels. • Ensure wheelchair access. • Provide tactile and auditory cues.
Wide Slide	Improves perceptual/motor skills.	Double the usual width permitting 2 children or an adult and one child to slide together.	• Install on embankment to reduce risk of injury in case of falls.

C. Physical Development

EQUIPMENT	GOALS AND BENEFITS	DESCRIPTION	MODIFICATIONS
Hand-over-hand Bars	Improves upper body strength and co-ordination.	Overhead bars at different heights.	• Construct at different heights to enable access from wheelchairs.
Chinning Bars	Improves upper body strength.	Chinning bars at different heights.	• Construct at different heights to enable access from wheelchairs.
Parallel Bars	Improves upper body strength and co-ordination, and balance.	Can be either horizontal or inclined.	• Construct at different levels and of different widths to enable access by more children.
Adjustable Basketball Hoop	Improves upper extremity strength and eye-hand co-ordination.	Basketball hoop adjustable to different heights.	• Ensure wheelchair access. • Add some sound producing device to serve as auditory cue.
Cargo/Chain/Tire Nets	Improves upper and lower extremity strength.	Can also serve as safety device below high towers.	• Construct multiple means of access.
Tube and Half tube Slides	Improves upper and lower extremity strength.	Enables child to slide independently.	• Construct multiple means of access.
Stairs and Inclined Ladders	Improves upper and lower extremity strength.	Wide enough to permit children to pass going up, down or sideways. Can be negotiated using arms or legs.	• Ensure ramped access.
Bridges	Improves balance and co-ordination.	May be tire bridges, clatter bridges or other modifications.	• Accessible by wheelchair where appropriate. • Provide handrails at different heights. • Provide textured surfaces. • Provide auditory cues for locating and knowing when in use.

D. Sensory Development

EQUIPMENT	GOALS AND BENEFITS*	DESCRIPTION	MODIFICATIONS
Music Panel	Stimulates auditory discrimination.	Incorporates a number of music producing devices that can be sounded with a stick or by hand.	• Devices should be at varying heights to ensure access. • Ensure surrounding surface is wheelchair accessible.
Coloured Panels	Stimulates visual awareness.	Different coloured panels placed side by side or throughout the area.	• None required.
Bucket Table	Stimulates tactile awareness.	Table with water and a bucket or buckets.	• Provide access for students in wheelchairs. • Provide indentations around the table to help students with poor balance.
Sand Box or Table	Stimulates tactile awareness.	Table or box with sand in it and ideally covered when not in use.	• Ensure wheelchair access. • Provide indentation around table to help balance. • If box, provide backed seating in corners for students with poor balance.

* These four goals and benefits may also provide artistic and aesthetic development by encouraging auditory, visual and tactile awareness.

E. Intellectual Development

EQUIPMENT	GOALS AND BENEFITS	DESCRIPTION	MODIFICATIONS
Tunnel	Concepts of in, out, through and across.	Tunnel.	• Multiple means of access.
Bridges	Concepts of over, under, up, down, high and low.	May be clatter bridges, tire bridges or other modifications.	• Accessible by wheelchair where appropriate. • Provide handrails at different heights. • Provide textured surfaces. • Provide auditory cues for locating and knowing when in use.
Walls with colours and shapes on them	Concepts of shapes and colours.	Modular panels with different shapes cut out or with different colours.	• Ensure wheelchair accessibility.
Bucket Table	Concepts of conservation of material, volume and measurement.	Bucket table with water in it and a bucket or buckets.	• Provide access for students in wheelchairs. • Provide indentations around table to help students with poor balance.
Relief Maps	Improve orientation and develop spatial concepts.	Relief maps of playground.	• Ensure wheelchair accessibility.
Guide Rails	Improve orientation and develop spatial concepts.	Guide rails around and at strategic locations throughout the playground.	• Provide at different heights.

Addendum

Historical Background

Over the years, public awareness and acceptance of the individual with disabilities have undergone significant change. Before the turn of the century such individuals were commonly hidden away at home with little or no chance to become productive participants in society. A few private "schools" for individuals with mental retardation, hearing and visual impairments had been established for the children of the wealthy who wanted either the best possible training available, or a place to keep their children out of sight.

After World War I, a greater level of participation by various governmental agencies became apparent. Generally, this took the form of large, centrally located institutions. While these often served the purpose of removing individuals with disabilities from public scrutiny, they also provided a safe haven for the rejected, and established a population base for the beginning of scientific inquiry into disabling conditions. During the Great Depression, fewer families were able to assume financial responsibility for their children with disabilities and increased numbers of these children were relegated to public institutions. Economic factors and public attitudes undoubtedly delayed the inclusion of special classes in the public schools. Co-operative programs funded and operated by parents were generally the only hope for the individual with disabilities to avoid institutionalization.

After World War II, there was an increased interest in the challenges of the disabled, perhaps because of the empathy generated by returning veterans with disabilities. Parents, tired of the expenses incurred by private school placement, began to turn to public sources for relief. The public school, undergoing rapid growth and basking in benefits of a greatly expanding tax base, became more receptive to requests for the establishment of special education programs. At the time, such programs most often consisted of special schools or special classes in regular schools. Colleges and universities, flush with government funding, began to train leadership personnel in special education, and established facilities for conducting badly needed research in the area.

In the past 20 years, there has been a virtual explosion of growth in special educational programming in all areas of exceptionality. Large numbers of teachers have been and are being trained with specialization in various types of handicapping conditions. The deinstitutionalization movement has seen the inclusion of increasing numbers of children in local school programs.

The greatest change in special education programming during recent years has been the movement toward the integration or mainstreaming of children with special needs into regular classrooms. To facilitate the inclusion of children with physical impairments in regular schools, it is necessary to design and remodel schools to enable maximum accessibility to all programs offered.

Bibliography

Safety

Brink, Satya (Ed.). *Play Safe: Guideline Recommendations for Safe Children's Play Spaces and Equipment.* Canadian Institute of Child Health, 1985.

Hendricks, Barbara (Ed.). *A Safe Place to Play: Guidelines for Safe Public Playgrounds.* Vancouver, BC: The Playground Network, 1985.

U.S. Consumer Product Safety Commission. *A Handbook for Public Playground Safety - Volume 1 General Guidelines for New and Existing Playgrounds.* Washington, DC: U.S. Consumer Products Safety Commission, 1978.

U.S. Consumer Product Safety Commission. *A Handbook for Public Playground Safety Volume 2: Technical Guidelines for Equipment and Surfacing.* Washington, DC: U.S. Consumer Product Safety Commission, 1978.

General Design Standards

Auburn School District No. 408, *Playground Guidelines,* Auburn: WA: 1986.

British Columbia Building Code Handbook, Section 3.7, Victoria, BC: Provincial Government 1984.

British Columbia Child Care Facilities Regulations, Vancouver, BC: Provincial Government 1985.

British Columbia Ministry of Education, *Ministry of Education Guidelines - Section* 3.20, Victoria, BC: 1989.

Canadian Standards Association, *Children's Play Spaces and Equipment: CAN/CSA-Z614 (Fourth Draft). Ottawa 1988.*

Accessible Design Standards

Adaptive Environments Center, Barrier Free Environments, *Access Guidebook* (Draft). Boston: Division of Capital Planning and Operations, and Office of Handicapped Affairs, 1987.

American National Standards Institute, *American National Standard for Building and Facilities: Providing Accessibility and Usability for Physically Handicapped People.* New York: American National Standards Inst., 1986.

Ariba, M.A.J. *Accessibility Standards Illustrated.* Springfield: Capital Development Board, 1978.

City of Otobicoke. *A Guideline for Accessible Site Design for Persons with Physical Disabilities.* Otobicoke: City of Otobicoke, 1986.

Dattner, R. "Play Without Barriers," *AS and U,* 50 (September 1977): 61-64.

Duncan, J., et al. "Environmental Modification of the Visually Impaired: A Handbook." *Journal of Visual Impairment and Blindness,* (December 1977).

Government of Canada. *Barrier-Free Design Standards*, Ottawa: Government of Canada, 1987.

Pinney, D., *Accessibility Standards and Guidelines for Public Buildings*. Calgary: Barrier Free Environment, 1986.

The Canadian National Institute for the Blind; *Access Needs of Blind and Visually Impaired Travellers in Transportation Terminals: A Study and Design Guidelines*. Toronto: CNIB, 1987.

The National Easter Seal Society for Crippled Children and Adults, *Checklist: Basic Design Specifications for Accessibility*. Fayetteville, IL: Barrier Free Environment.

Accessible Playground Design

Canadian Parks/Recreation Association. *Getting it Built - Accessible: A Guide to the Planning and Design of Recreation Facilities*, Vanier, Ont: Canadian Parks/Recreation Assn., 1983.

Environment Canada - Canadian Parks Service *Access Series: Design and Parks Programs*. Ottawa: Minister of Supply and Services, 1989.

Kearley, M. & Hann, F. *Ability Playground*. St. John's, Nfld: Newfoundland and Labrador Recreation Advisory Council for Special Groups, 1978.

Manitoba Department of Fitness, Recreation and Sport. *Access Leisure*. Winnipeg: Manitoba Department of Fitness, Recreation and Sport, 1977.

Curriculum

Province of British Columbia. *Year 2000: A Curriculum and Assessment Framework for the Future (Draft Document)*, Victoria, BC: Ministry of Education, 1989.

Miscellaneous

Finlay, A., M. George, S. Richmond, and S. Scott, *"Aiding the Disabled - Helpful Hints for Wheelchair Riders and Guiders"*. Vancouver, BC: Vancouver Health Department.

Jambor, T. and R. Gargiulo, "The Playground - A Social Entity for Mainstreaming". *Journal of Physical Education, Recreation and Development* (October 1987): 18-23.

Beckwith, J. "Play Environments for all Children". *Leisure Today, Journal of Physical Education, Recreation and Development* 56 (May-June 1985): 32-35.

Stout, J. "Planning Playgrounds for Children with Disabilities. *The American Journal of Occupational Therapy* 42 (October 1988): 653-658.

Appendices

The following are examples of the survey forms, checklists, or evaluation sheets that could be used during the planning process. Those presented here should not be considered comprehensive for all situations. The actual contents for any given school district will change depending upon the topography of the playground site, the characteristics of the children using the facilities, the resources available for the projects, and the community.

These examples should be altered and expanded to fit the individual needs of each playground.

Appendix I
THE UNIVERSAL PLAYGROUND
ACTION PLAN CHECKLIST

• *Planning Steps*	*YES*	*NO*
1. Has a commitment been made by the school district to develop a playground accessible to all children?	☐	☐
2. Has a planning committee representative of school professionals, the community and the consumer population been appointed?	☐	☐
3. Has the rationale for the project, with goals and objectives been formulated?	☐	☐
4. Have the problems and needs of the project been determined?	☐	☐
5. Has a work schedule with time lines leading to the completion of the project been developed?	☐	☐
6. Has an inventory including reference materials, articles, catalogues, and guidelines been accumulated?	☐	☐
7. Have all relevant municipal and provincial regulations and policies been reviewed?	☐	☐
8. Have the available levels of financial and personnel resources been determined?	☐	☐
9. Has the decision been made whether or not a commercial contractor or an architect will be retained?	☐	☐
10. Have hearings, and/or a survey of potential users of the facility been conducted?	☐	☐
11. Has a list been developed of desired elements in the final plan?	☐	☐
12. Have the alternatives to be included immediately been included?	☐	☐
13. Have the remaining alternatives included in the final plan been prioritized for future inclusion?	☐	☐
14. Have potential sources of future funding been investigated?	☐	☐
15. Have working blueprints of the project been drawn up?	☐	☐
16. Have bids been let to contractors or construction begun by local personnel?	☐	☐
17. Has the project been publicized through various media sources and an opening day celebration planned?	☐	☐
18. Has a final inspection for safety and workmanship been conducted and certification of approval granted?	☐	☐

Appendix II
THE UNIVERSAL PLAYGROUND
PLANNING SURVEY

Dear Friend:

The Planning Committee of the Universal Playground is interested in your ideas for creating the ideal play environment for all children in the community. We would greatly appreciate your assistance in responding to the following items [Please check the appropriate box(es)].

1. Which one of the following categories best describes your position?

- ☐ REGULAR TEACHER
- ☐ SPECIAL TEACHER
- ☐ STUDENT
- ☐ PARENT
- ☐ OTHER Please specify → _____

2. Which one of the following categories best describes you or your student's special needs?

- ☐ SOCIAL/EMOTIONAL
- ☐ INTELLECTUAL
- ☐ PHYSICAL
- ☐ PERCEPTUAL-MOTOR
- ☐ OTHER Please specify → _____

3. What adaptations would be most useful?

- ☐ WIDE PARKING SPACE
- ☐ WIDE WALKWAYS
- ☐ HANDRAILS ON WALKWAYS
- ☐ RESILIENT IMPACT AREAS
- ☐ RAMPS TO HIGH EQUIPMENT
- ☐ REST/OBSERVATION AREAS
- ☐ CURB RAMPS
- ☐ SMOOTH, NON-SKID WALKS
- ☐ TEXTURED RAMPS AND WALKS
- ☐ HANDRAILS AROUND EQUIPMENT
- ☐ COLOURED AREA MARKERS
- ☐ SAFE TRAFFIC PATTERNS
- ☐ OTHER Please Specify → _____

4. Which of the following pieces of equipment would the student(s) most enjoy?

- ☐ WORK/PLAY TABLES
- ☐ PLAY COUNTER
- ☐ PLAY TOWERS
- ☐ GEOMETRIC PANELS
- ☐ COLOURED PANELS
- ☐ MERRY-GO-ROUND
- ☐ HAND-OVER-HAND BARS
- ☐ SPRING TEETER TOTTER
- ☐ CARGO/CHAIN/TIRE NET
- ☐ TUBE AND HALF-TUBE SLIDE
- ☐ CHINNING BAR
- ☐ TIRE CRAWL BRIDGE
- ☐ SAND TABLE
- ☐ PLAY HUT
- ☐ CRAWL TUNNEL
- ☐ BRIDGES
- ☐ SAND BOX
- ☐ TIRE SWING
- ☐ BALANCE BEAM
- ☐ WIDE SLIDE
- ☐ GADGET PANEL
- ☐ SPRING RIDE
- ☐ PARALLEL BARS
- ☐ FIREMAN'S POLE
- ☐ SAND CRANE
- ☐ STEERING WHEEL
- ☐ SYMPATHETIC SWING
- ☐ MUSICIAN'S PANEL
- ☐ BUCKET/WATER TABLE
- ☐ RELIEF MAP OF PLAYGROUND
- ☐ CARGO NET SWING
- ☐ STANDARD SOFT SEAT SWING
- ☐ ADJUSTABLE TETHERBALL
- ☐ MONKEY BARS
- ☐ ADJUSTABLE BASKETBALL HOOP
- ☐ STAIRS AND INCLINED LADDERS
- ☐ OTHER Please specify → _____

5. Will student(s) be using the playground during out-of-school hours?

- ☐ YES
- ☐ NO

6. Comments or Suggestions

Appendix III
THE UNIVERSAL PLAYGROUND ACCESSIBILITY CHECKLIST

• *Adaptation*	*YES*	*NO*
1. Is there a wide parking space with an access symbol on it near the playground area?	☐	☐
2. Can a person in a wheelchair reach the walkways without having to pass behind parked cars?	☐	☐
3. Are there curb ramps to enable wheelchairs to reach the walkways?	☐	☐
4. Are walkways at least 1.5 metres (5 feet) wide?	☐	☐
5. Are walkways smooth with appropriate surfaces and proper gradients?	☐	☐
6. Do walkways have handrails on at least one side?	☐	☐
7. Has vegetation overhanging the walkway been removed and any toxic or thorny plants eliminated?	☐	☐
8. Have firm, but resilient materials been used to enable children with mobility problems to reach the access and egress points for each activity?	☐	☐
9. Are resilient materials provided at all places where potential impact may occur?	☐	☐
10. Are handrails or other barriers placed around all moving pieces of equipment?	☐	☐
11. Are there two or more methods to access or egress each piece of equipment?	☐	☐
12. Is a variety of colour used to help orient children with visual impairments?	☐	☐
13. Are there rest areas provided out of the traffic pattern?	☐	☐
14. Are there appropriate (1:12 grade) ramps, at least 90 centimetres (3 feet) wide, to enable children with mobility impairments to reach all activity areas?	☐	☐
15. Has equipment been modified to enable access by children with special needs?	☐	☐
16. Are the landings wide enough to enable wheelchairs to turn?	☐	☐

Appendix IV
THE UNIVERSAL PLAYGROUND
EQUIPMENT DESIGN RATING SCALE

Rate each category: as 1.(Very Poor) 2. (Poor) 3. (Fair) 4. (Good) and 5. (Very Good)

EQUIPMENT NAME	ACCESS	SAFETY	DURABILITY	EASE OF MAIN-TENANCE	TOTAL POINTS
1.					
2.					
3.					
4.					
5.					
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